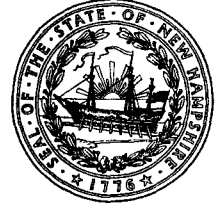




The State of New Hampshire  
***Department of Environmental Services***



**Michael P. Nolin**  
Commissioner

April 19, 2004  
**Letter of Deficiency**  
DSP#04-022

Mr. Tom Willis  
City of Rochester  
45 Old Dover Road  
Rochester, NH 03867

RE: Hanson Brook Dam #204.12, Rochester

Dear Mr. Willis:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, a scheduled inspection was conducted on November 12, 2002 and a follow-up inspection was conducted on February 19, 2004. During these visual inspections and/or file reviews, the following deficiencies were observed:

1. Most of the trees and brush that were present on the upstream and downstream embankments of the dam have been removed. However, there are still trees growing within 15 feet of the downstream toe of the dam on both the right and left embankments of the dam;
2. There were areas of seepage along the toe of the left embankment and along the base of the right stone retaining wall, approximately ten feet to the right of the spillway. Standing water was present at the toe of the left embankment of the dam, beginning approximately 20 feet to the left of the spillway and extending to the end of the dam;
3. Stones have been dislodged from the downstream face of the right stone retaining wall, approximately 20 feet to the right of the spillway;
4. There were eroded gullies on the upstream face of the dam. Vehicle tracks were noted on the downstream face of the left embankment, adjacent to the spillway where vehicles cross the discharge channel;
5. There was a lack of vegetative cover in the areas adjacent to the spillway training walls;
6. The cross section of the embankment is very irregular. The crest's width varies from between 6 and 10 feet, the upstream and downstream slopes are uneven, and the crest elevation varies along most of the embankment's length;
7. There was erosion along most of the length of the upstream face of the embankment due to wave action;

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8. The dam crest was one foot below the spillway abutment walls on both sides of the spillway resulting in a reduction in the estimated spillway discharge capacity. Therefore, the dam cannot pass the 50-year storm event with one foot of freeboard in its current configuration. If the crest of the dam is regarded to be consistent with the top of the spillway abutment walls, the dam will be able to pass the 50-year storm event with one foot of freeboard;
9. Access to the crest of the dam by off-road vehicles is unrestricted; and
10. The 1999 operation and maintenance plan (O&M) needs to be updated to reflect current employee contacts.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

**June 1, 2004:**

1. Review and update the 1999 O&M plan on file. Enclosed is a copy of the plan;

**December 1, 2003:**

2. Remove trees and brush that are present within 15 feet of the downstream toe of the dam on both sides of the spillway;
3. Remediate the areas of seepage along the toe of the left embankment and along the base of the right stone retaining wall, approximately ten feet to the right of the spillway;
4. Repair the unraveling stone wall along the downstream face of the right embankment;
5. Repair the eroded gullies on the upstream face of the dam and along the downstream face of the left embankment;
6. Regrade the crest of the dam to bring the elevation level with the top of the concrete spillway abutment walls and the width of the dam consistent along its entire length;
7. Revegetate the crest and embankments of the dam; and
8. Control vehicle access along the crest and embankments of the dam.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

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Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely,

  
Grace E. Levergood, P.E.  
Dam Safety Engineer

Attachments Copy of 1999 O&M on file, Sketch Illustrating Deficiencies, DB8, DB13  
cc: Gretchen R. Hamel, Legal Unit Administrator  
Certified # 7006 1670 0000 0585 9824  
GEL/was/h:/safety/wendy/lod/204-12lod.doc